

Compound and Simple Interest

Simple

$$I = Prt$$

GICs
Bonds

Compound

$$A = P_0(1+i)^t$$

Stockmarket

bank account

 $I = \text{interest}$ $P = \text{principle}$ $r = \text{rate } \%$ $t = \text{time}$ $A = \text{Annuity}$ $P_0 = \text{principle (original)}$ $i = \text{interest rate}$ $t = \text{time}$

Mike invests \$2000 for 10 years at an annual interest rate of 4% simple interest. Michael invests \$2000 for 10 years at an annual interest rate compounded monthly.

What is the principle of their investments after 10 years.

May 10-7:53 AM

8.1 savings Plans p.448-453

Compound and Simple Interest

Simple

$$I = Prt$$

Compound

$$A = P_0(1+i)^t$$

$$I = Prt$$

$$I = ?$$

$$P = \$2000$$

$$r = 4\% \Rightarrow 0.04$$

$$t = 10$$

$$I = (2000)(0.04)(10)$$

$$I = \$800$$

$$A = I + P$$

$$A = \$800 + \$2000$$

$$A = \$2800$$

$$A = ?$$

$$P_0 = 2000$$

$$i = 0.04/12 = 0.0033$$

$$t = 10 \times 12 = 120$$

$$A = 2000(1.0033)^{120}$$

$$A = \$2951.66$$

May 10-8:32 AM

Terminology
Brainstorming

RESP - Retirement
government sponsored
investment
18% annually
returns - refund
2%

RESP - education
government sponsored
investment
- max \$2500/yr
- 100 yr

Savings
assets \Rightarrow house, business
investments

CRA - Canada pension plan

TFS - Tax Free
Savings Account
\$500/yr

CPI - consumer price index

Inflation $\rightarrow 2\%$

May 10-8:05 AM

Pay Yourself First

10%

1500 net income

Savings account

- pre authorized transfer

\$150 into Savings b/c you
pay bills, gas, rent etc...

Apr 30-8:56 AM

Key Concepts

- Establishing a savings plan will help you to attain your financial goals.
- Planning major purchases in advance can allow you to pay in cash and eliminate the need to accumulate debt.

p. 451- 453 q. 1-4, 7, 8, 10

Apr 30-8:57 AM

2 c) Savings \$2612.14

$$n = 1 \times 12$$

$$P_0 = 2612.14$$

$$r = 0.0275 / 12$$

$$= 0.0023$$

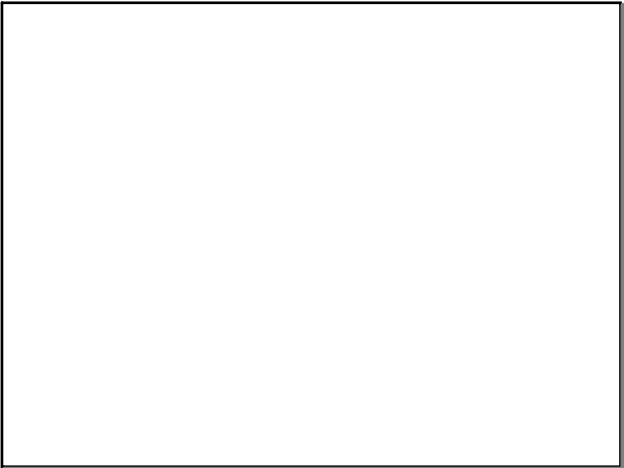
$$A = P_0(1+r)^n$$

$$= 2612.14(1.0023)^{12}$$

$$= 2612.14(1.03)$$

$$= 2685.15$$

Dec 5-12:11 PM



May 16-10:04 AM